State of Hawai'i DEPARTMENT OF LAND AND NATURAL RESOURCES

Division of Aquatic Resources Honolulu, Hawai'i 96813 October 24, 2014

Board of Land and Natural Resources State of Hawai'i Honolulu, Hawai'i

REQUEST FOR APPROVAL TO HOLD PUBLIC MEETINGS AND HEARINGS
PURSUANT TO HRS CHAPTER 91, TO AMEND HAWAII ADMINISTRATIVE RULES
(HAR) TITLE 13, CHAPTER 60.4, "WEST HAWAI'I REGIONAL FISHERY
MANAGEMENT AREA, HAWAI'I," TO ESTABLISH THE KA'ŪPŪLEHU MARINE
RESERVE TO ALLOW FOR THE RECOVERY OF NEARSHORE FISHERY STOCKS

Submitted for your consideration and approval is a request to hold public meetings and hearings to amend Hawaii Administrative Rules (HAR) Title 13, chapter 60.4, "West Hawai'i Regional Fishery Management Area, Hawai'i," to establish the Ka'ūpūlehu Marine Reserve. The proposed amendments would provide a 10-year "no take" rest period—with limited exceptions—to allow for the recovery of reef fish stocks prior to the implementation of a subsistence fishery management plan for Ka'ūpūlehu.

HISTORY

In 1998, the Hawai'i State Legislature passed Act 306 (now codified in HRS chapter 188F), which established the West Hawai'i Regional Fishery Management Area (WHRFMA). The WHRFMA encompasses the ocean area off approximately 147 miles of shoreline, from Ka Lae, Ka'ū (South Point) to 'Upolu Point, North Kohala.\textsuperscript{The establishment of the WHRFMA was intended, among other purposes, to "[e]nsure the sustainability of the State's nearshore ocean resources; . . . minimiz[e] user conflicts and resource depletion; . . . [c]arry out scientific research and monitoring; . . . [and] provide for substantive involvement of the community in resource management decisions.\textsuperscript{"2 Act 306 required DLNR to "adopt rules" and "identify the specific areas and restrictions after close consultation and facilitated dialogue with working groups of community members and resource users."3

In keeping with this statutory mandate, DLNR has developed the proposed Kaʻūpūlehu Marine Reserve rules in close consultation with the West Hawaiʻi Fisheries Council (WHFC) and the Kaʻūpūlehu Marine Life Advisory Committee (KMLAC). The WHFC was formed in 1998 to develop management recommendations for the WHRFMA. The group consists of stakeholders and community representatives, as well as non-voting, ex-officio members from such programs as the Division of Aquatic Resources (DAR), the Division of Conservation and Resources

¹ Haw. Rev. Stat. § 188F-2.

² Haw. Rev. Stat. § 188F-3.

³ 1998 Haw. Sess. Laws Act 306, §3 at 988.

Enforcement, UH Sea Grant, and others. The WHFC has met monthly since July 1998, and at least 1,800 community members have attended one or more WHFC meetings.

The Ka'ūpūlehu Marine Life Advisory Committee (KMLAC) was formed in 1995 to involve community members in efforts to oversee and effectively manage the marine resources within the Ka'ūpūlehu ahupua'a. Members of the KMLAC include representatives from the Hualālai Development Corporation ("HDC"), Kamehameha Schools ("KS"), the Kona Hawaiian Civic Club ("KHCC"), and OHA. A Nā Kūpuna Council of individuals with genealogical ties to the area advises the KMLAC. Since its inception, the KMLAC has continued to meet regularly in order to carry out its objectives to monitor, document, and eventually develop a management plan for the nearshore marine resources of Ka'ūpūlehu.

The management objectives of chapter 188F are currently implemented by chapter 13-60.4, HAR, which was originally promulgated in 1999 and amended in 2005 as chapter 13-60.3, before being re-adopted as a new chapter 13-60.4 in 2013. This chapter now includes fourteen Fish Replenishment Areas (FRAs) and Netting Restricted Areas (NRAs), and contains rules regulating aquarium fisheries, the taking of various species, SCUBA spearfishing, netting, and fish feeding. The WHFC had substantial input into the contents of these rules, and has continued to serve its role in providing community involvement in the management of the WHRFMA.

The Ka'ūpūlehu FRA is included as a regulated area within the WHRFMA.⁵ Accordingly, aquarium fish collecting, fish feeding, and lay netting are currently prohibited along the approximately four miles of coastline that are covered by the FRA.⁶ In recent years, however, there has been growing concern regarding the observed depletion of nearshore fish stocks, which has been attributed in large part to increased fishing pressure facilitated by significantly expanded coastal access provided by a new highway and parking areas along the Ka'ūpūlehu coastline.

Based upon reef fish life histories, ongoing and extensive biological monitoring studies, monthly water quality testing, fisher surveys, and consultation with the Nā Kūpuna Council, the KMLAC has proposed a ten-year rest period, subject to limited exceptions, to enable Kaʻūpūlehu's reef fish stocks to recover and provide the robust, highly-fecund breeding populations necessary to support a sustainable subsistence fishery. Between 2009 and 2014, the KMLAC and WHFC conducted a number of public community meetings and other outreach efforts throughout Hawai'i Island to gather community input on the proposal. A summary of the Kaʻūpūlehu public outreach efforts is attached as **Exhibit 1**.

DAR has worked with the WHFC and KMLAC to develop draft rules to re-designate the Kaʻūpūlehu Fish Replenishment Area as a marine reserve where the take of nearshore marine life will be prohibited for 10 years, with exceptions to allow for the continued harvest of pelagic and deep benthic species using specific fishing gear. The proposal is consistent with the statutory mandate in HRS 188F-4(3) to establish a portion of the Fish Replenishment Areas where no

⁴ <u>See</u> Maurin, P. and S. Peck. 2008. The West Hawai'i Fisheries Council Case Study Report. University of Hawaii Sea Grant. 32pp.

⁵ HAR § 13-60.4-2(b)(3).

⁶ HAR § 13-60.4-5.

fishing of reef-dwelling fish is allowed. The temporary nature of the closure reflects the Department's commitment to adaptive management, where management measures are evaluated and modified based on changing ecosystem conditions. Not only is this approach consistent with statutory provisions that require ongoing scientific research and monitoring (HRS §188F-3(6)) and periodic review and reporting (HRS §188F-5) within the WHRFMA, but it is widely regarded within the scientific community as essential for effective marine resource management.

PURPOSE

A. Amendments to Hawaii Administrative Rules (HAR) section 13-60.4-2, Geographical jurisdiction of chapter provisions.

This section is being amended to re-categorize the Ka'ūpūlehu Fish Replenishment Area as the Ka'ūpūlehu Marine Reserve, and to incorporate by reference updated Exhibits reflecting this change.

B. Amendments to Hawaii Administrative Rules (HAR) section 13-60.4-3, Definitions.

A number of definitions are added to provide clarity on the regulatory provisions for the implementation of the Ka'ūpūlehu Marine Reserve. This includes definitions for "deploy", "fishing gear", "hook-and-line", "kona crab net", and "marine reserve".

C. Amendments to Hawaii Administrative Rules (HAR) section 13-60.4-5, Activities prohibited within selected areas.

Amendments to subsections (a) and (c) of this section would add "marine reserve" as an area subject to this section, update references to the new chapter Exhibits, and reflect the recategorization of the Ka'ūpūlehu Fish Replenishment Area as the Ka'ūpūlehu Marine Reserve.

New subsections (d) and (f) are added to reflect the ten-year rest period proposed by the KMLAC. The possession or deployment of fishing gear or the possession of marine life within the Kaʻūpūlehu Marine Reserve is prohibited for at least ten years, or until a comprehensive fishery management plan is implemented, subject to the following exceptions:

- 1. Fishing by hook-and-line for selected bottomfish and benthic species ('ōpakapaka, kalekale, lehi, gindai, onaga, ehu, hāpu'upu'u, uku, nabeta) and invasive species (ta'ape, tō'au, and roi) outside of the twenty-fathom contour, and the possession of such species within the marine reserve;
- 2. Fishing by hook-and-line for pelagic species (aku, ahi, tombo, a'u, ono, mahimahi) outside of the twenty-fathom contour, and the possession of such species within the marine reserve; and
- 3. Crabbing for kona crab using kona crab nets only, while seaward of the twenty-fathom contour, and the possession of kona crab within the marine reserve.

A new subsection (e) is added to provide an additional permit exception to the prohibitions in subsection (d), for the permitted take and possession of invasive species within the Kaʻūpūlehu Marine Reserve. Permits may be issued by the Department of Land and Natural Resources in accordance with HRS §§187A-6 and 188-53.

The proposed rules drafted in Ramseyer format are attached as Exhibit 2.

RECOMMENDATION:

"That the Board authorize and approve the holding of public meetings and hearings according to the rulemaking requirements of HRS chapter 91, to amend Hawaii Administrative Rules (HAR) Title 13, chapter 60.4, to establish the Ka'ūpūlehu Marine Reserve to allow for the recovery of nearshore fish stocks."

"That the Board delegate to the Chairperson the authority to appoint a hearings officer to conduct the aforementioned public meetings and hearings."

Respectfully submitted,

Frazer McGilvray, Administrator Division of Aquatic Resources

APPROVED FOR SUBMITTAL

William Aila, Jr., Chairperson

Department of Land and Natural Resources

Attachments

Exhibit 1 – Ka'ūpūlehu's Public Outreach Efforts

Exhibit 2 – Proposed rules (Ramseyer format)

KA'ŪPŪLEHU'S PUBLIC OUTREACH EFFORTS

The table below provides a summary of the various levels of public outreach from 2009-2014. Members of the Ka'ūpūlehu Marine Life Advisory Committee (KMLAC) and 'ohana from the Ka'ūpūlehu area are committed to past and ongoing efforts to raise meaningful public awareness about the proposed Ka'ūpūlehu Marine Protected Area rules and ten year rest period. These outreach efforts also include efforts to develop a rule package that was inclusive of diverse and regular input from varying stakeholders, communities, and professionals, experienced in community based coastal management.

Ka'û	pūlehu's Public Outreach Ef	forts.
Levels of Outreach	Number of Meetings, Exchanges, Outreach Efforts (estimated)	Number of Individuals (estimated)
KMLAC Member Meetings	33	16 members + guests
KMLAC Public Outreach Efforts	22	460
Publicly Noticed Meetings for Proposal	4	270
Focus Meetings with DLNR Chairperson	2	19
Creel Surveys	245	250 ¹
WHFC Meetings	18	16 WHFC members at each meting and total 100 public attendees
Exchange and Learning Opportunities	6	400
News Articles Published	9	13,700 ² WHT subscribers 13,000 ³ HFN subscribers
Brochures Passed Out	13 venues	2,000
TOTALS	352	30,2314

¹ The number of creel surveys taken does not capture the number of individuals reached during each creel survey done, nor does it take into account the possible overlap of individuals.

² Subscribers were verified by West Hawaii Today (WHT) staff are based on average of subscribers in 2010, when one of the WHT articles was published.

³ Subscribers were verified by Hawaii Fishing News (HFN) staff are based on current estimates.

⁴ The total estimated number of individuals reached does not take into account the possible overlap of individuals.

Amendments to Chapter 13-60.4 Hawaii Administrative Rules

(date of adoption)

- 1. Section 13-60.4-2, Hawaii Administrative Rules, is amended to read as follows:
- "\$13-60.4-2 Geographical jurisdiction of chapter provisions. (a) The provisions of this chapter shall apply to the West Hawai'i regional fishery management area, bounded by the west coast of Hawai'i Island, from Ka Lae, Ka'ū (South Point) to 'Upolu Point, North Kohala, and extending from the upper reaches of the wash of the waves on shore, seaward to the limit of the State's police power and management authority.
- (b) The following marine reserves, fish replenishment areas, and netting restricted areas shall be established within the boundaries of the West Hawai'i regional fishery management area (as depicted in the exhibit entitled ["Map of Fish Replenishment Area and Netting Restricted Area Boundaries", dated 9/21/11,] "Map of Marine Reserve, Fish Replenishment Area, and Netting Restricted Area Boundaries", dated 12/12/12, located at the end of this chapter):
 - (1) Kaʻūpūlehu marine reserve, identified on shore to the north by the northern boundary of the Kaʻūpūlehu ahupuaʻa and to the south by the southern side of Kikaua Point (south of Kūkiʻo Bay);
 - [(1)](2) North Kohala fish replenishment area,
 identified on shore to the north by Kamilo
 Gulch and to the south by the Kawaihae
 Lighthouse;
 - [(2)] (3) Puakō-'Anaeho'omalu fish replenishment area, identified on shore to the north by the southern end of the Puakō Bay and Puakō Reef fisheries management area and to the south by the southern side of 'Anaeho'omalu Bay (Kapalaoa);

- [(3) Ka'ūpūlehu fish replenishment area, identified on shore to the north by the northern boundary of the Ka'ūpūlehu ahupua'a and to the south by the southern side of Kikaua Point (south of Kūki'o Bay);]
- (4) Kaloko-Honokōhau fish replenishment area, identified on shore to the north by the southern boundary of Wāwāloli Zone (a Kona Coast fisheries management area defined in section 13-58-2) at Wawahiwa'a Point and to the south by Noio Point;
- (5) Kailua-Keauhou fish replenishment area, identified on shore to the north by the southern boundary of Kailua Bay Zone, Kona Coast fisheries management area defined in section 13-58-2, and to the south by the northern boundary of the Keauhou Bay fisheries management area defined in section 13-57-1;
- (6) Red Hill fish replenishment area, identified on shore to the north at Nenue Point and to the south by Keawakāheka Point;
- (7) Nāpoʻopoʻo-Hōnaunau fish replenishment area, identified on shore to the north by the southern boundary of Kealakekua Bay marine life conservation district (Manini Beach Point) and to the south by the southern boundary of Puʻuhonua o Hōnaunau (Kiʻilae);
- (8) Ho'okena fish replenishment area, identified on shore to the north by Loa Point and to the south by Ka'ū Loa Point;
- (9) Ka'ohe Beach fish replenishment area (Pebble Beach), identified on shore to the north by signage south of Ka'ū Loa Point, and to the south by signage north of 'Au'au Point;
- (10) Miloli'i fish replenishment area, identified on shore to the north by Makahiki Point and to the south by Kāki'o Point;
- (11) Kikaua Point-Mākole'ā Point netting restricted area, identified on shore to the north by Kikaua Point (Kalae o Kikaua) and

- to the south by Mākole'ā Point (near Kekaha Kai State Park);
- (12) Nenue Point-Kealakekua Bay netting restricted area, identified on shore to the north by the northern boundary of the Red Hill fish replenishment area and to the south by the northern boundary of the Kealakekua Bay marine life conservation district;
- (13) Hanamalo Point-Kanewa'a Point netting restricted area, identified on shore to the north by Hanamalo Point, inclusive of Okoe Bay and Kapu'a Bay, and to the south by Kanewa'a Point, South Kona; and
- (14) Kanonone-Kalīpoa netting restricted area, identified on shore to the north by Kanonone, inclusive of Pōhue Bay, Kahakahakea, and identified to the south by Kalīpoa, Ka'ū.

Unless otherwise described, any area described in this chapter shall be described by four reference points identified by their latitude and longitude coordinates, as provided in the tables located at the end of this chapter entitled ["Table of Reference Coordinates to Fish Replenishment Area Boundaries", dated 9/21/11,] "Table of Reference Coordinates to Marine Reserve and Fish Replenishment Area Boundaries", dated 12/12/12, and ["Table of Reference Coordinates to Netting Restricted Area Boundaries", dated 9/21/11,] "Table of Reference Coordinates to Netting Restricted Area Boundaries", dated 12/12/12, and as may be further indicated by signage on or about the shoreline. The four points shall be identified as the landward northern point, the landward southern point, the seaward northern point, and the seaward southern point. The landward boundary for each of these areas shall be an imaginary line drawn along the highest wash of the waves between the landward northern point and the landward southern point. Should there be a stream or river flowing into the ocean, the landward boundary shall be an imaginary

straight line drawn between the shoreline on either side of the stream or river, as if the stream or river was not there. Imaginary straight lines drawn through the landward and seaward northern points, and through the landward and seaward southern points, shall constitute the northern and southern boundary lines of each area. The seaward boundary of each area shall be determined by an imaginary line drawn along the one hundred fathom (six hundred feet) depth contour, between the intersection of the one hundred fathom depth contour and the northern and southern boundary lines. Seaward GPS reference points are for guidelines and the one hundred fathom depth contour otherwise controls the seaward boundary. Any area designated in this chapter shall include the submerged lands and overlying waters within these four boundaries.

- (c) The following areas, designated and subject to additional regulations in other chapters, shall also be considered and regulated as part of the West Hawai'i regional fishery management area:
 - (1) Lapakahi marine life conservation district, as described in chapter 13-33;
 - (2) Kawaihae Harbor fisheries management area, as described in chapter 13-55;
 - (3) Wailea Bay marine life conservation district, as described in chapter 13-35;
 - (4) Old Kona Airport marine life conservation district, as described in chapter 13-37;
 - (5) Kealakekua Bay marine life conservation district, as described in chapter 13-29;
 - (6) Puakō Bay and Puakō Reef fisheries management area, as described in chapter 13-54;
 - (7) Kīholo Bay fisheries management area, as described in chapter 13-60;
 - (8) Kailua Bay fisheries management area, as described in chapter 13-52;
 - (9) Keauhou Bay fisheries management area, as described in chapter 13-57;
 - (10) Kona Coast fisheries management area, as described in chapter 13-58;

Except for the area encompassed by the Kawaihae Harbor fisheries management area, Kawaihae commercial harbor shall not be regulated as part of the West Hawai'i regional fishery management area.

- 2. Section 13-60.4-3, Hawaii Administrative Rules, is amended by adding a new definition to read as follows:
- ""Deploy" means to place the specified gear in the water, in whole or in part."
- 3. Section 13-60.4-3, Hawaii Administrative Rules, is amended by adding a new definition to read as follows:
- ""Fishing gear" means any net, spear, rod, reel, hook-and-line, slurp gun, or any other equipment or gear adapted, designed, or commonly used to take or capture aquatic life."
- 4. Section 13-60.4-3, Hawaii Administrative Rules, is amended by adding a new definition to read as follows:
- "Hook-and-line" means a fishing line to which one or more hooks or other tackle are attached. A hook-and-line may include a fishing rod or reel or both to deploy and retrieve the line."
- 5. Section 13-60.4-3, Hawaii Administrative Rules, is amended by adding a new definition to read as follows:

- ""Kona crab net" means a mesh net encircled by a rigid frame no more than three feet in length in any direction."
- 6. Section 13-60.4-3, Hawaii Administrative Rules, is amended by adding a new definition to read as follows:
- "Marine reserve" means an area where any and all extraction of reef-related marine life, either alive or dead, or any portion of the reef structure, including coral, rocks, plants, algae, sand, shells, or any feature of the natural reef, shall be prohibited."
- 7. Section 13-60.4-5, Hawaii Administrative Rules, is amended to read as follows:
- "\$13-60.4-5 Activities prohibited within selected areas. (a) No person may engage in fish feeding while within any of the marine reserves, fish replenishment areas, or netting restricted areas described in section 13-60.4-2(b) or any of the other areas listed in section 13-60.4-2(c).
- (b) While within the fish replenishment areas described in section [13-60.4-2(b)(1) to (10),] 13-60.4-2(b)(2) to (10), or while within any of the areas listed in section 13-60.4-2(c) other than the Kīholo Bay fisheries management area, no person may:
 - (1) Collect aquatic life for aquarium purposes; or
 - (2) Possess any aquarium collecting gear, or take or possess any specimen of aquatic life for aquarium purposes, except that aquarium collecting gear or aquatic life collected for aquarium purposes may be possessed while onboard a vessel in active transit through the areas, provided that no collecting gear is in the water during the transit. Boats that are adrift, anchored, or moored are not considered to be in active transit.

- (c) No person may lay net fish while within the following areas, as described in section 13-60.4-2(b) and in the tables located at the end of this chapter entitled ["Table of Reference Coordinates to Fish Replenishment Area Boundaries", dated 9/21/11,] "Table of Reference Coordinates to Marine Reserve and Fish Replenishment Area Boundaries", dated 12/12/12, and ["Table of Reference Coordinates to Netting Restricted Area Boundaries", dated 9/21/11:] "Table of Reference Coordinates to Netting Restricted Area Boundaries", dated 12/12/12:
 - (1) Puakō-'Anaeho'omalu fish replenishment area;
 - [(2) Ka'ūpūlehu fish replenishment area;
 - (3)] (2) Kikaua Point-Mākole'ā netting restricted area (Kekaha Kai State Park);
 - [(4)] (3) Nenue Point(Red Hill fish replenishment area)-Kealakekua Bay netting restricted area;
 - [(5)] (4) Hanamalo Point-Kanewa'a Point netting restricted area;
 - [(6)] (5) Kanonohe-Kalīpoa netting restricted area; and
 - [(7)] (6) Kaloko-Honokōhau fish replenishment area, except that a person may lay net fish in the Kaloko-Honokōhau fish replenishment area using only a locally-constructed, handmade lay net of natural fibers, that is registered and used in compliance with section 13-60.4-6.
- (d) Except as provided in subsection (e), and subject to all other applicable laws, while within the Ka'ūpūlehu marine reserve no person may:
 - (1) Take or attempt to take any specimen of aquatic life, provided that the following species may be taken by hook-and-line seaward of the twenty fathom (120 feet) depth contour: Pristipomoides filamentosus ('ōpakapaka), Pristipomoides sieboldii (kalekale), Aphareus rutilans (lehi), Pristipomoides zonatus (gindai), Etelis coruscans (onaga), Etelis carbunculus (ehu), Epinephelus quernus (hāpu'upu'u), Aprion

virescens (uku), Lutjanus kasmira (taʻape),
Cephalopholis argus (roi), Lutjanus fulvus
(toau), Iniistius pavo (nabeta), Katsuwonus
pelamis (aku), Thunnus spp. (ahi and tombo),
Family Istiophoridae (aʻu), Acanthocybium
solandri (ono), Coryphaena spp. (mahimahi);
and provided further that Ranina ranina
(kona crab) may be taken by kona crab nets
only, while seaward of the twenty fathom
(120 feet) depth contour;

- (2) Possess any specimen of marine life other than the species listed in subsection (d) (1) above;
- (3) Possess or use any fishing gear other than hook-and-line or kona crab nets or both; or
- (4) Deploy any fishing gear (including hook-andline or kona crab nets) shoreward of the twenty fathom (120 feet) depth contour.
- (e) The department may issue permits in accordance with sections 187A-6 and 188-53, Hawaii Revised Statutes, for the take of non-native or invasive species of fish and invasive algae from the Kaʻūpūlehu Marine Reserve.
- 8. Material, except source notes, to be repealed is bracketed. New material is underscored.
- 9. Additions to update source notes to reflect these amendments are not underscored.

10. These amendments to chapter 13-60.4, Hawaii Administrative Rules, shall take effect ten days after filing with the Office of the Lieutenant Governor.

I certify that the foregoing are copies of the rules, drafted in the Ramseyer format pursuant to the requirements of section 91-4.1, Hawaii Revised Statutes, which were adopted on _______, and filed with the Office of the Lieutenant Governor.

WILLIAM J. AILA, JR.
Chairperson
Board of Land and Natural
Resources

APPROVED FOR PUBLIC HEARING:

---/ s /---Deputy Attorney General

Map of Marine Reserve, Fish Replenishment Area, and Netting Restricted Area Boundaries* (12/12/12)

Marine Reserves and

Fish Replenishment Areas **Netting Restricted Areas** North Kohala Puakō-'Anacho'omalu Puakō-'Anacho'omalu Ka'űpülehu Ka'ūpūlehu Kikaua Point - Mākole'ā Kaloko-Honokōhau Kaloko-Honokõhau Nenue Pt.-Kailua-Keauhou Kealakekua Bay Red Hill Năpo'opo'o-Hōnaunau Ho'okena Ka'ohe Hanamalo Pt.-Kancwa'a Pt. Miloli'i Kanonohe - Kalipoa

^{*}Maps and tables do not reflect regulated areas and their specific prohibitions (including gear restrictions) that are defined in other chapters, as described in section 13-60.4-5(c)

Table of Reference Coordinates to Marine Reserve and Fish Replenishment Area Boundaries (12/12/12)

Area	Landward dGP	d dGPS Coordinates	Seawar	d dGPS	Seaward dGPS Coordinates (600 ft.)	ft.)	
	Northern Point	Southern Point	Northern Point	O (mm)	Southern Point	D (mm)	(a)
North Kohala FRA	20° 04.826' N	20° 02.471' N	20° 04.378' N	1.40	20° 01.654' N	1.94	225°
	155° 51.934' W	155° 49.988' W	155° 53.344' W		155° 51.875' W		225°
Puakō – 'Anaeho'omalu FRA	19° 57.529' N	19° 54.641' N	19° 59.206' N	2.40	19° 57.034' N	3.54	300°
	155° 51.553' W	155° 53.893' W	155° 53.383° W		155° 56.658' W		300°
Ka'ūpūlehu Marine Reserve	19° 51.011' N	19° 49.209' N	19° 53.817' N	3.91	19° 51.724' N	4.39	300°
	155° 58.111' W	156° 00.132' W	156° 00.994' W		156° 03.947' W		300°
Kaloko – Honokōhau FRA	19° 41.442' N	19° 40.059' N	19° 41.368' N	0.35	19° 39.844' N	0.46	240。
	156° 02.350° W	156° 01.741' W	156° 03.031' W		156° 02.169' W		240°
Kailua – Keauhou FRA	19° 37.903° N	19° 33.716' N	19° 37.089' N	2.02	19° 32.801° N	2.21	245°
	155° 59.472° W	155° 57.829'W	156° 01.449' W		156° 00.004' W		245°
Red Hill FRA	19° 30.823' N	19° 29.252' N	19° 30.166' N	1.41	19° 28.991' N	0.51	235°
	155° 57.630° W	155° 57.068° W	155° 58.953' W		155° 57.536' W		235°
Nāpoʻopoʻo – Hōnaunau FRA	19° 28.230′ N	19° 24.559' N	19° 28.350′ N ²	1.13	19° 24.725' N	0.79	270°
	155° 55.370° W	155° 54.343' W	155° 56.898' W		155° 55.162° W		270°
Ho'okena FRA	19° 23.796' N	19° 19.458' N	19° 23.690' N	0.40	19° 19.403° N	0.25	240°
	155° 54.685' W	155° 53.426' W	155° 55.095' W		155° 53.688' W		240°
Ka'ohe FRA	19° 18.954' N	19° 18.714' N	19° 18.947' N	0.44	19° 18.706' N	0.48	270°
	155° 53.362' W	155° 53.296' W	155° 53.824' W		155° 53.806 W		270°
Miloli'i FRA	19° 12.179' N	19° 08.098' N	19° 12.179' N	0.15	19° 08.160' N	0.36	270°
	155° 54.369° W	155° 55.132' W	155° 54.599'W		155° 55.510° W		270°

^{1,2} Northern Boundary runs 0.25nm along existing Kealakekua Bay MLCD southern boundary to 19° 28.443' N/155° 55.708' W and then 270° to seaward northern point.

FRA = Fish Replenishment Area

D (nm) = distance in nautical miles from the landward points to the seaward points

@ = compass heading from landward coordinates to seaward coordinates

Table of Reference Coordinates to Netting Restricted Area Boundaries (12/12/12)

Netting Restricted Area**	Landward dGP	d dGPS Coordinates	Seawar	d dGPS	Seaward dGPS Coordinates (600 ft.)	ft.)	
	Northern Point	Southern Point	Northern Point	D (um)	Southern Point	D (nm)	@
Puako - 'Anaeho'omalu	19° 57.529' N	19° 54.641' N	19° 59.206' N	2.40	19° 57.034' N	3.54	300°
	155° 51.553° W	155° 53.893' W	155° 53.383' W		155° 56.658' W		300°
Ka'ūpūlehu	19° 51.011' N	19° 49.209' N	19° 53.817' N	3.91	19° 51.724' N	4.39	300°
	155° 58.111' W	156° 00.132' W	156° 00.994' W		156° 03.947' W		300°
Kikaua Point - Mākole'ā	19° 49.130' N	19° 46.356' N	19° 52.100' N	4.41	19° 49.000' N	3.98	300°
	156° 00.063' W	156° 03.024' W	156° 03.566' W		156° 06.164' W		300°
Kaloko - Honokōhau	19° 41.442' N	19° 40.059' N	19° 41.368' N	0.35	19° 39.844' N	0.46	240°
	156° 02.350' W	156° 01.741' W	156° 03.031' W		156° 02.169' W		240°
Nenue Pt Kealakekua Bay	19° 30.823' N	19° 28.699' N	19° 30.166' N	1.41	19° 28.316' N	06.0	235°
	155° 57.630° W	155° 56.114' W	155° 58.953' W		155° 56.983' W		235°
Hanamalo Pt Kanewa'a Pt.	19° 09.273' N	19° 07.091' N	19° 09.275' N	0.55	19° 07.093' N	0.18	260°
	155° 54.973' W	155° 55.115' W	155° 55.564' W		155° 55.313° W		260°
Kanonone - Kalīpoa	19° 00.662' N	18° 58.180' N	19° 00.409' N	0.25	18° 57.941' N	0.24	200°
	155° 48.302° W	155° 44.182° W	155° 48.302° W		155° 44.183' W		200°

**Netting restrictions may also apply in marine reserves and fish replenishment areas (see map entitled "Map of Marine Reserve, Fish Replenishment, and Netting Restricted Area Boundaries", dated 12/12/12) and in areas designated under separate chapters, as described in section 13-60.4-2(c)

D (nm) = distance in nautical miles from the landward points to the seaward points @ = compass heading from landward coordinates to seaward coordinates